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SLCO2A1 Rabbit pAb

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Catalog # AP94031

Product Information

Application	WB
Primary Accession	Q92959
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	70044
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PGT/Slco2a1
Epitope Specificity	611-643/643
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell membrane; Multi-pass membrane protein.
SIMILARITY	Belongs to the organo anion transporter (TC 2.A.60) family. Contains 1 Kazal-like domain.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The organic anion transporting polypeptide (OATP) family of proteins play a role in drug absorption, distribution and excretion. OATP proteins mediate the uptake of a broad range of substrates, including bile salts, hormones, drugs and antibiotics, and they are expressed in various tissues, such as gut, brain, kidney and liver. PGT, also known as SLCO2A1 (solute carrier organic anion transporter family, member 2A1), SLC21A2 or OATP2A1, is a 643 amino acid multi-pass membrane protein that belongs to the organic anion transporter family. Expressed ubiquitously, PGT is thought to mediate the release, transepithelial transport and clearance of prostaglandins from cells to other areas of the body. The gene encoding PGT maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

Additional Information

Gene ID	6578
Other Names	Solute carrier organic anion transporter family member 2A1, SLCO2A1, OATP2A1, PHOAR2, Prostaglandin transporter, PGT, Solute carrier family 21 member 2, SLC21A2, SLCO2A1 (HGNC:10955), OATP2A1, SLC21A2
Target/Specificity	Ubiquitous.
Dilution	WB=1:500-2000,Flow-Cyt=3ug/Test

Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SLCO2A1 (HGNC:10955)
Synonyms	OATP2A1, SLC21A2
Function	Mediates the transport of prostaglandins (PGs, mainly PGE2, PGE1, PGE3, PGF2alpha, PGD2, PGH2) and thromboxanes (thromboxane B2) across the cell membrane (PubMed:11997326, PubMed:26692285, PubMed:8787677). PGs and thromboxanes play fundamental roles in diverse functions such as intraocular pressure, gastric acid secretion, renal salt and water transport, vascular tone, and fever (PubMed:15044627). Plays a role in the clearance of PGs from the circulation through cellular uptake, which allows cytoplasmic oxidation and PG signal termination (PubMed:8787677). PG uptake is dependent upon membrane potential and involves exchange of a monovalent anionic substrate (PGs exist physiologically as an anionic monovalent form) with a stoichiometry of 1:1 for divalent anions or of 1:2 for monovalent anions (PubMed:29204966). Uses lactate, generated by glycolysis, as a counter-substrate to mediate PGE2 influx and efflux (PubMed:11997326). Under nonglycolytic conditions, metabolites other than lactate might serve as counter-substrates (PubMed:11997326). Although the mechanism is not clear, this transporter can function in bidirectional mode (PubMed:29204966). When apically expressed in epithelial cells, it facilitates transcellular transport (also called vectorial release), extracting PG from the apical medium and facilitating transport across the cell toward the basolateral side, whereupon the PG exits the cell by simple diffusion (By similarity). In the renal collecting duct, regulates renal Na+ balance by removing PGE2 from apical medium (PGE2 EP4 receptor is likely localized to the luminal/apical membrane and stimulates Na+ resorption) and transporting it toward the basolateral membrane (where PGE2 EP1 and EP3 receptors inhibit Na+ resorption) (By similarity). Plays a role in endometrium during decidualization, increasing uptake of PGs by decidual cells (PubMed:16339169). Involved in critical events for ovulation (PubMed:27169804). Regulates extracellular PGE2 concentration for follicular development in the ovaries (By similarity). Expressed intracellularly, may contribute to vesicular uptake of newly synthesized intracellular PGs, thereby facilitating exocytotic secretion of PGs without being metabolized (By similarity). Essential core component of the major type of large- conductance anion channel, Maxi-Cl, which plays essential roles in inorganic anion transport, cell volume regulation and release of ATP and glutamate not only in physiological processes but also in pathological processes (By similarity). May contribute to regulate the transport of organic compounds in testis across the blood-testis- barrier (Probable).
Cellular Location	Cell membrane; Multi-pass membrane protein. Basal cell membrane; Multi-pass membrane protein. Cytoplasm {ECO:0000250|UniProtKB:Q9EPT5}. Lysosome {ECO:0000250|UniProtKB:Q9EPT5}. Note=Localized to the basal membrane of Sertoli cells.
Tissue Location	Ubiquitous (PubMed:22331663, PubMed:8787677). Significant expression observed in lung, kidney, spleen, and heart (PubMed:22331663). Expressed in the endometrium (at both mRNA and protein levels) (PubMed:15657371, PubMed:16339169). Expressed in the ovaries (at mRNA and protein levels)

(PubMed:27169804). In testis, primarily localized to the basal membrane of Sertoli cells and weakly expressed within the tubules (PubMed:35307651)

Background

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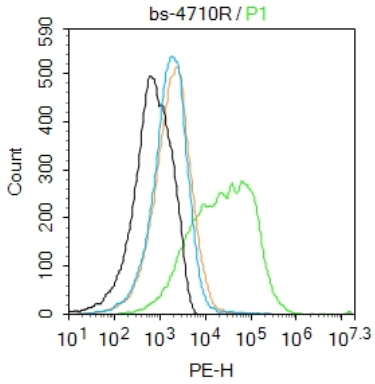
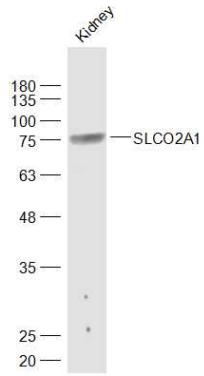
Images



Blank control: Mouse kidney. Primary Antibody (green line): Rabbit Anti-SLCO2A1 antibody (AP94031) Dilution: 3 µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-PE Dilution: 1 µg /test. Protocol The cells were incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Sample: Kidney (Mouse) Lysate at 40 ug Primary: Anti-SLCO2A1 (AP94031) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 70 kD Observed band size: 75 kD